

II. CLAIMS

1. (Previously Presented) Diagnostic procedure for identification of a disorder of a pancreas in a patient comprising determining an overall content of all known pancreatic elastases (iso-enzymes) in the patient's serum, secretions or excretions by administering immuno-chemical systems using monoclonal or polyclonal antibodies, being single specific antibodies or cross-reactive antibodies that can recognize pancreatic elastases I, II or III (iso-enzymes) but which cannot recognize an elastase fragment with the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1).

2. Cancelled

3. (Previously Presented) The procedure according to claim 1, comprising obtaining antibodies by means of antigens selected from the group consisting of complete elastases 1, 2 and 3 and of their sub-units wherein the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1) is not used as an elastase fragment or as an immunologically effective partial sequence thereof.

4. (Currently Amended) The procedure according to claim 3, wherein synthetic peptides are used as antigens to induce antibodies which cross-reactively recognize several elastases but which cannot recognize the antigen with the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1) and such synthetic peptides are selected from the group consisting of :

NH₂-A-V-K-E-G-P-E-Q-V-I-P-I-N-COOH (SEQ ID NO: 2)

NH₂-Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R-COOH (SEQ ID NO: 3)

NH₂-R-S-G-C-N-G-D-S-G-G-P-L-N-COOH (SEQ ID NO: 5 ~~SEQ ID NO: 5~~)

NH2-G-P-L-N-C-P-T-E-D-G-G-W-Q-COOH (~~SEQ ID NO: 5~~ SEQ ID NO: 4)
NH2-G-T-E-A-G-R-N-S-W-P-S-Q-I-COOH (SEQ ID NO: 6)
NH2-H-N-L-S-Q-N-D-G-T-E-Q-Y-V-COOH (SEQ ID NO: 7)
NH2-W-G-K-T-K-T-N-G-Q-L-A-COOH (SEQ ID NO: 8)
NH2-V-S-S-R-G-C-N-V-S-R-K-P-T-COOH (SEQ ID NO: 9)
NH2-G-G-E-E-A-R-P-N-S-W-P-W-Q-COOH (SEQ ID NO: 10)
NH2-S-S-S-R-T-Y-R-V-G-L-G-R-H-N-COOH (SEQ ID NO: 11)
NH2-K-D-W-N-S-N-Q-I-S-K-G-N-D-COOH (SEQ ID NO: 12)
NH2-G-P-L-N-C-Q-A-S-D-G-R-W-COOH (SEQ ID NO: 13)
NH2-G-A-L-P-D-D-L-K-Q-G-R-L-COOH (SEQ ID NO: 14)
NH2-S-L-Q-Y-E-K-S-G-S-F-Y-COOH (SEQ ID NO: 15) and
NH2-F-G-C-N-T-R-R-K-P-T-V-F-T-COOH (SEQ ID NO: 16).

5. (Previously Presented) The procedure according to claim 1, wherein the antibodies are used singly or in a combination.

6. (Previously Presented) Immunological test kits for a diagnosis and progress check of diseases of the pancreas of a patient using stool or body fluids containing one or more of monoclonal or polyclonal antibodies, where the antibodies are single specific antibodies or cross-reactive antibodies that can recognize all elastase iso-enzymes but not the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1).

7. (Currently Amended) Procedure for obtaining monoclonal and/or polyclonal antibodies that react specifically with human elastase 1 in stool or body fluids and are induced by immunization procedures, comprising administering peptides

A-V-K-E-G-P-E-Q-V-I-P-I-N (SEQ ID NO: 2),

Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R (SEQ ID NO: 3),

R-S-G-C-N-G-D-S-G-G-P-L-N (SEQ ID NO: 5 ~~SEQ ID NO: 4~~) and

G-P-L-N-C-P-T-E-D-G-G-W-Q (~~SEQ ID NO: 5~~ SEQ ID NO: 4) or

immunogenic portions of these peptides to a vertebrate,
inducing the formation of antibodies, and
separating and purifying the formed antibodies,
thereby obtaining monoclonal and/or polyclonal antibodies
that react specifically with human elastase 1 in stool or
body fluids.

8. (Previously Presented) The procedure according to claim 7,
comprising coupling peptides with carrier substances before
administration to the vertebrate.

9. (Previously Presented) The procedure according to claim 7,
wherein the vertebrate is a chicken.

10. (Previously Presented) The procedure of claim 7 where the
antibodies are polyclonal antibodies.

11. (Previously Presented) The procedure of claim 7 where the
antibodies are monoclonal antibodies.

12. (Previously Presented) Synthetic peptide A-V-K-E-G-P-E-Q-V-
I-P-I-N (SEQ ID NO: 2).

13. (Previously Presented) Synthetic peptide Y-T-N-G-P-L-P-D-K-
L-Q-Q-A-R (SEQ ID NO: 3).

14. (Currently Amended) Synthetic peptide R-S-G-C-N-G-D-S-G-G-P-
L-N (~~SEQ ID NO: 4~~ SEQ ID NO: 5).

15. (Currently Amended) Synthetic peptide G-P-L-N-C-P-T-E-D-G-G-
W-Q (~~SEQ ID NO: 5~~ (SEQ ID NO: 4)).

16. Cancelled

17. (Currently Amended) Immunological test kits for diagnosis and progress check of diseases of a pancreas and of mucoviscidosis using stool or body fluids comprising antibodies induced by synthetic peptides selected from the group consisting of:

NH2-A-V-K-E-G-P-E-Q-V-I-P-I-N-COOH (SEQ ID NO: 2)
NH2-Y-T-N-G-P-L-P-D-K-L-Q-Q-A-R-COOH (SEQ ID NO: 3)
NH2-R-S-G-C-N-G-D-S-G-G-P-L-N-COOH (~~SEQ ID NO: 4~~ SEQ ID NO: 5)
NH2-G-P-L-N-C-P-T-E-D-G-G-W-Q-COOH (~~SEQ ID NO: 5~~ SEQ ID NO: 4)
NH2-G-T-E-A-G-R-N-S-W-P-S-Q-I-COOH (SEQ ID NO: 6)
NH2-H-N-L-S-Q-N-D-G-T-E-Q-Y-V-COOH (SEQ ID NO: 7)
NH2-W-G-K-T-K-T-N-G-Q-L-A-COOH (SEQ ID NO: 8)
NH2-V-S-S-R-G-C-N-V-S-R-K-P-T-COOH (SEQ ID NO: 9)
NH2-G-G-E-E-A-R-P-N-S-W-P-W-Q-COOH (SEQ ID NO: 10)
NH2-S-S-S-R-T-Y-R-V-G-L-G-R-H-N-COOH (SEQ ID NO: 11)
NH2-K-D-W-N-S-N-Q-I-S-K-G-N-D-COOH (SEQ ID NO: 12)
NH2-G-P-L-N-C-Q-A-S-D-G-R-W-COOH (SEQ ID NO: 13)
NH2-G-A-L-P-D-D-L-K-Q-G-R-L-COOH (SEQ ID NO: 14)
NH2-S-L-Q-Y-E-K-S-G-S-F-Y-COOH (SEQ ID NO: 15) and
NH2-F-G-C-N-T-R-R-K-P-T-V-F-T-COOH (SEQ ID NO: 16)

which antibodies are bound to a carrier and cross-reactively recognize several elastases but which cannot recognize the amino-acid sequence Thr-Met-Val-Ala-Gly-Gly-Asp-Ile-Arg (SEQ ID NO: 1).

18. (Previously Presented) Immunological test kits according to claim 17, wherein 2 different antibodies are used and the test kit is a Sandwich-ELISA test kit.

19. (Previously Presented) The procedure of claim 8 where the

immunization procedure comprises coupling peptides to hemocyanin.

20. (Previously Presented) The procedure according to claim 3 where synthetic peptides are used as antigens for induction of B-cells which are fused with myeloma cells for generating hybridoma cells which are cultivated in cell lines producing specific monoclonal antibodies.

21. (Previously Presented) The procedure of claim 1 where the antibodies are polyclonal antibodies.

22. (Previously Presented) The procedure of claim 7 where the antibodies are polyclonal antibodies.